

**Amendments to the Specification**

Please replace the paragraph at page 7, lines 6-20, with the following amended paragraph:

FIG. 3 is a schematic illustration of a supercritical processing system 300 for processing a semiconductor wafer with a fluid, in accordance with embodiments of the present invention. As FIG. 3 depicts, in one embodiment of the invention, a supercritical processing system 300 for processing a semiconductor wafer with a fluid includes a circulation loop 303 coupled to a high-pressure processing chamber 301. In one embodiment, the supercritical processing system 300 includes an inlet means 305 for introducing the fluid into the circulation loop 303. In certain embodiments, the inlet means 305 includes an inlet port 310 in the circulation loop 303 and a back-pressure regulator 330 coupled to the inlet port 310. In one embodiment of the invention, the inlet means 305 includes a pump 340 for compressing the fluid to form a pressurized fluid, a first line 317' for transferring the pressurized fluid from the pump 340 to the back-pressure regulator 330 and a second line 317 for transferring a quantity of the fluid from the fluid source ~~350~~ 321 to the pump 340. In one embodiment, the first line 317' is configured to maintain a uni-directional flow 335 of the pressurized fluid from the pump towards the back-pressure regulator. In one embodiment, the second line 317 is configured to maintain a uni-directional flow 345 of the fluid from the fluid source 321 through a valve 323 to the pump 340.